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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/597,493	07/25/2008	Ingo Speier	PH010518US3 (TIR043)	1835
78823	7590	05/13/2011	EXAMINER	
Philips Intellectual Property and Standards P.O. Box 3001 Briarcliff Manor, NY 10510-8001			CARTER, WILLIAM JOSEPH	
			ART UNIT	PAPER NUMBER
			2875	
			NOTIFICATION DATE	DELIVERY MODE
			05/13/2011	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/597,493	Applicant(s) SPEIER, INGO	
	Examiner WILLIAM J. CARTER	Art Unit 2875	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 July 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 June 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>8/27/07</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-7, 10, 12-16, 19, 21, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin (2006/0215411) in view of You et al. (7,281,818).

With respect to claim 1, Lin teaches a light-emitting apparatus (Fig. 4), the apparatus comprising: a) a carrier (30) including one or more light transmission regions (31); and b) one or more light-emitting elements (24) for generating light, each of the one or more light-emitting elements mounted on a substrate (21), the substrate being inferiorly mounted onto the carrier in order that each of the one or more light-emitting elements are proximate to one of the one or more light transmission regions (Fig. 4); wherein the one or more light-emitting elements are adapted for connection to a source of power for activation thereof (Abstract).

Lin does not explicitly teach a light-emitting apparatus connectible to a thermal management system, one or more light-emitting elements mounted on a substrate having a cooling interface, wherein the cooling interface is directed away from the carrier and is adapted for connection to a thermal management system.

With respect to claim 1, You teaches a light-emitting apparatus connectible to a thermal management system (Fig. 10), one or more light-emitting elements (1) mounted

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on a substrate (14) having a cooling interface (interface between 14 and 105 in Fig. 10), wherein the cooling interface is directed away from the carrier (Fig. 10) and is adapted for connection to a thermal management system (105).

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to use the thermal management system of You in the light-emitting apparatus of Lin, in order to provide heat sinking (column 5, lines 54-56 of You) so that the light sources will last longer and operate better.

As for claim 2, Lin teaches each of the one or more light transmission regions (31) are defined by either an opening within the carrier (30) or transparent portion of the carrier (Figs. 3 and 4).

As for claim 3, Lin teaches the substrate (21) comprises circuit traces electrically coupled to the one or more light-emitting elements or the substrate comprises multiple electrically conductive planes electrically coupled to the one or more light-emitting elements (paragraph 13).

As for claim 4, Lin teaches the substrate (21) comprises contact pads (22) providing electrical and mechanical connection (paragraph 13 and Fig. 4) to the carrier (30).

As for claim 5, Lin teaches the carrier (30) comprises indexing features (edges of 31 that align with 121 and 122 and items 32) for aligning the substrate with the carrier (Figs. 1-4 and paragraph 12).

As for claim 6, Lin teaches one or more optics (11) are mounted onto the substrate (21) and optically coupled to the one or more light-emitting elements (24).

As for claim 7, Lin teaches each of the one or more light transmission regions (31) are defined by an opening within the carrier (30) and wherein one or more light-emitting elements (23) are configured to be inserted into one or more of the openings (Figs. 3 and 4).

As for claim 10, Lin teaches the carrier (30) mates with an insert (11) and said insert is configured to provide extraction of the light and shaping the light into a beam (paragraph 12).

As for claim 12, Lin teaches one or more of the light transmission regions (31 and 11) is configured as a transparent optical element (11), wherein the transparent optical element is selected from the group comprising a dome lens (Figs. 1-3), Fresnel lens, lenticular lens array and diffuser.

As for claims 13-16, 19, and 21, Lin and You teach all of the claimed elements, as discussed above.

As for claim 22, Lin and You teach all of the disclosed elements, which are assembled as claimed, thus the method is inherently taught.

Claims 8, 9, 11, 17, 18, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin and You as applied to claims 1 and 13 above, and further in view of Schultz et al. (2005/0116235).

With respect to claims 8, 9, 11, 17, 18, and 20, Lin and You teaches all of the claimed elements, as discussed above, except for explicitly teaching the carrier is fabricated from a thermally conductive material; wherein the carrier is fabricated from FR4 board; wherein the carrier is fabricated from a transparent material.

As for claims 8 and 17, Schultz also drawn to light-emitting apparatuses, teaches a carrier (34, 36, 40, 42, and 70) is fabricated from a thermally conductive material (paragraph 46).

As for claims 9 and 18, Schultz teaches it is well known in the art for a carrier to be fabricated from FR4 board (paragraph 7).

As for claims 11 and 20, Schultz teaches the carrier is fabricated from a transparent material (70).

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to use the materials of the carrier of Schultz in the carrier of Lin, in order to provide improved thermal properties (paragraph 10 of Schultz) so that the light source lasts longer and operates better. Further Schultz teaches it is well known to make carriers of FR4 material (paragraph 7 of Schultz) in order to provide a material that is strong and inexpensive.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to WILLIAM J. CARTER whose telephone number is (571)272-0959. The examiner can normally be reached on Monday through Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diane I. Lee can be reached on (571)272-2399. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/William J Carter/
Examiner, Art Unit 2875
5/4/11